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AUTHOR Luksetich, William A.
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ABSTRACT

The major purposes of this teaching unit are to increase the students' understanding of economic concepts and economic reasoning, and to explain how economic reasoning can be applied to an analysis of the causes and remedies of crime. The unit examines the economics of crime in dollars as well as the causes of crime and programs to reduce criminal activity. The unit centers on public policies that might be undertaken to control criminal activity. After a brief introduction in chapter 1, chapter 2 discusses the magnitude and distribution of crime, including the criminals, the victims, and compensation for the victims. Chapter 3 examines the economics of crime in relation to the profits to the criminal and the economics of crime prevention. The fourth chapter of the unit deals with the illegal drug problem. The unit concludes with a discussion of the problems of resource allocation at the various stages of the criminal justice system. (Author/JR)

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1. INTRODUCTION

The major purposes of this teaching unit are to increase the students' understanding of economic concepts and economic reasoning and to explain how economic reasoning can be applied to an analysis of the causes of and remedies to crime.

Traditionally, when one talks about the economics of crime the discussion is usually in terms of costs; what the dollar value of criminal activity is and how much society spends to prevent crime. Although this unit, in part, is devoted to the costs of crime, most of the discussion centers on the causes of crime and programs to reduce criminal activity.

Economists have not, in the past, had much to say about illegal activity. Recently this has changed. This unit centers on the relatively new approach used by economists in their work on the causes of crime and the public policies that might be undertaken to control criminal activity. This new approach treats criminals as rational individuals who turn to crime because their benefits from illegal activity are greater than their benefits from legal occupations. Thus, increasing the costs of crime to the criminal should decrease the crime rate. In short, punishment works.

The first part of this teaching unit deals with the costs of crime. It differs from the usual discussion of this topic because strong emphasis is placed on the problems faced by victims of crime and whether or not they should be compensated for their misfortune. This discussion is followed by an examination of the causes of crime and the programs and/or policies that might be utilized to curtail criminal activity.

The fourth chapter of the teaching unit deals with the illegal drug problem. The unit concludes with a discussion of the problems of resource allocation at the various stages of our criminal justice system.

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2. CRIME: MAGNITUDE AND DISTRIBUTION

The material in this Chapter deals with three major topics. Initially, data are presented which indicate the magnitude and the rate of growth of crime. This is followed by a discussion which indicates the segments of the population that commit the most crimes and are the victims of criminal activity. The Chapter concludes with a discussion of victim compensation programs.

Costs of Crime

The Federal Bureau of Investigation Index of Serious Crimes is the most widely publicized classification of crime and crime rates. The FBI includes seven crimes in its serious crime index: murder, forcible rape, aggravated assault, robbery, burglary, larceny ($50 and over) and auto theft. A comparison of the rate of growth of this index with the estimates of the dollar value of crime in 1965 indicates the magnitude and the increasing severity of the crime problem.

As shown in Table 1, the total economic impact of crime approaches $15 billion, the largest component of the total accounted for by gambling. This is an activity in which organized crime predominates.

An examination of the trend of indexed crime over the past decade gives strong indication that the problem is worsening. From 1960 to 1970, serious crime increased by 176 percent, while the crime rate (offenses per 100,000 population) increased 144 percent. Over the same period, population increased by 13 percent. These trends are shown in Figure 1.

The Uniform Crime Report (UCR) data are often divided into two parts: crimes against persons (called violent crime) and crimes against property. The crimes in the first category are murder, assault, rape and robbery. The crimes in the second category, which make up 88 percent of the FBI index, are burglary, larceny over $50 and auto theft.

Over the decade, 1960 to 1970, violent crime increased by 156 percent, while the violent crime rate was up by 126 percent. Property crime increased by even greater amounts. Property crime was up 180 percent between 1960 and 1970, while the property crime rate increased by 147 percent.

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Table 1

Economic Impact of Crimes, 1965

	$ MILLIONS	
Crimes against persons		815
Homocide*	750	
Assault, rape*	65	
Crimes against property		3,932
Robbery, burglary, larceny, auto theft*	600	
Unreported commercial theft	1,400	
Embezzelment	200	
Fraud	1,350	
Forgery	82	
Arson and vandalism	300	
Other crimes		2,036
Driving under the influence	1,816	
Tax fraud	100	
Abortion	120	
Illegal goods and services		8,075
Narcotics	350	
Loan sharking	350	
Prostitution	225	
Alcohol	150	
Gambling	7,000	
	TOTAL	14,858

* FBI index crime

Source: The President's Commission on Law Enforcement.

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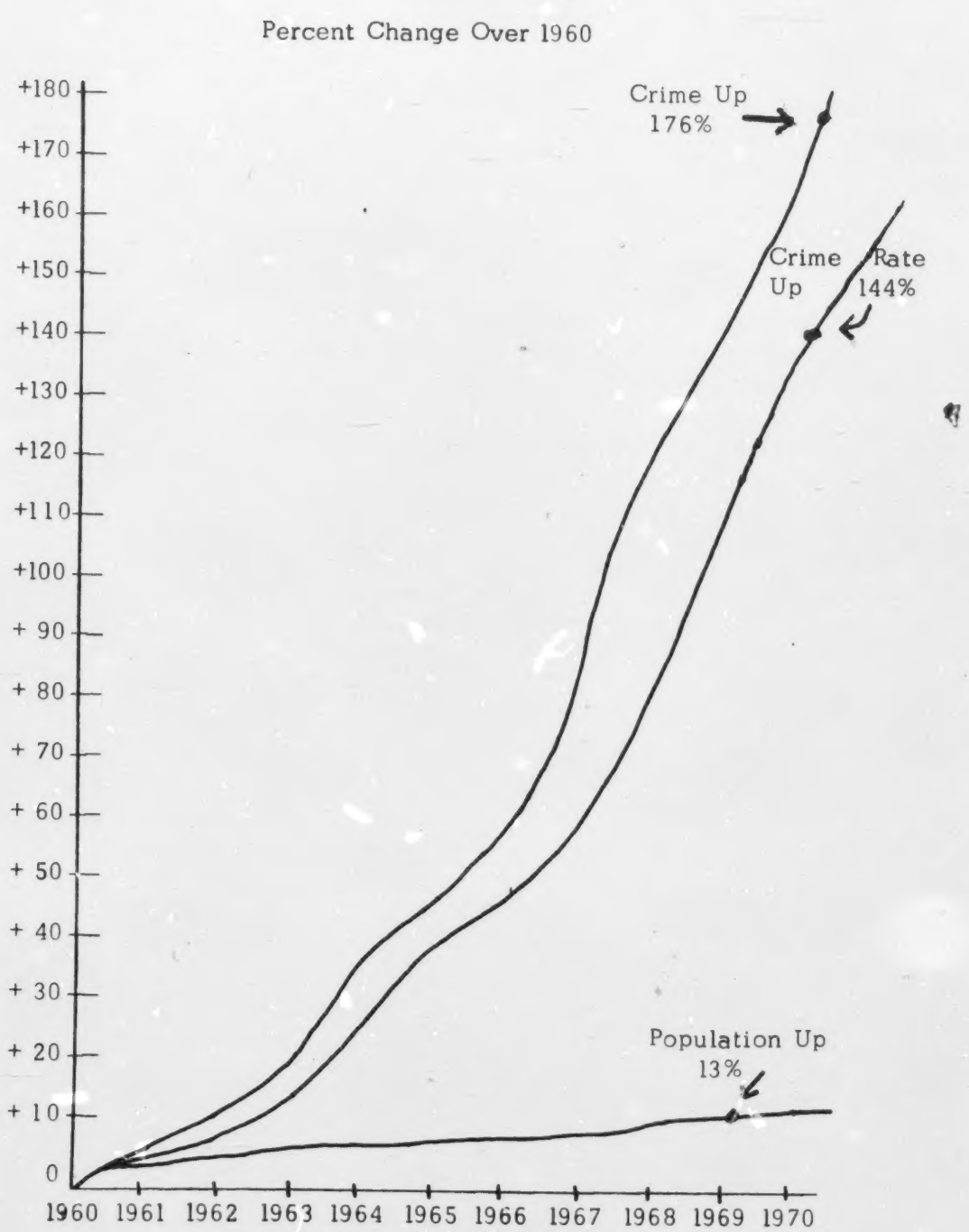
Figure 1

Crime and Population: 1960-1970



Source: FBI, Uniform Crime Reports, 1970.

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(Note: While most individuals know what is meant by murder, rape, assault, and auto theft, the distinction between robbery, burglary, and larceny is often not clear. Robbery is most often distinguished from larceny by the offender's use of threat of force; petty larceny is most often distinguished from grand larceny by the worth of the stolen property; burglary is most often distinguished from unlawful entry or trespass by method of entry and the intent of the person entering the premises.[1])

As shown in Table 2, total expenditures for crime control and prevention totaled over $6 billion in 1965. For the year July 1, 1970 to June 30, 1971, total government spending on the criminal justice system was $10.5 billion. The number of employees in the system in October 1971 was 929,473. Thus, total government expenditures in 1971 were greater than total government expenditures plus total private expenditures in 1965.

These costs and expenditures of criminal activity divert resources that could have been used to produce other goods and services. This diversion of scarce productive resources, and the resulting sacrifice of other goods, represents the true costs of criminal activity.

The Offenders

There are a number of reasons why it is very difficult to determine exactly who commits crimes. First, not all crime is reported. It is generally agreed that only 40 percent of all serious crimes are reported to police. The percent of crime reported also varies from city to city. A recent survey by the Law Enforcement Assistance Administration and the Census Bureau disclosed a crime rate figure five times as high as police figures in Philadelphia, almost three times as high in Chicago, Detroit and Los Angeles, and slightly more than twice as high in New York.[2]

The problem of determining who commits crime is further complicated by the fact that arrest occurs for only about 12 percent of all crimes. However, we can get some indication of who offenders are by examining the arrest data. The arrest data indicate that crimes, especially economic crimes, are essentially a male phenomenon. During the period 1957 through 1967

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[1]Michael D. Maltz, Evaluation of Crime Control Programs, (Washington, D.C., U.S. Department of Justice, April 1972), p. 27.

[2]"Big City Crime 'Double What's Reported,'" St. Paul Pioneer Press, April 15, 1974, p. 1.

Table 2

Public and Private Expenditures
For Crime Control and Prevention: 1965

	$ MILLIONS	
Public Expenditures on Criminal Justice		
Police		2,792
Local	2,201	
State	348	
Federal	243	
Prosecution		105
Public Defenders		20
Courts		261
Local	173	
State	51	
Federal	37	
Corrections		1,034
Local	343	
State	632	
Federal	59	
	TOTAL	4,212
Private Expenditures		
Prevention services		1,350
Prevention equipment		200
Insurance		300
Court costs		60
	TOTAL	1,910
	GRAND TOTAL	6,122

Source: President's Commission on Law Enforcement

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more than 97 percent of those arrested for crimes of burglary, robbery, and auto theft were males in the 18 to 19 year age bracket. Arrest rates for various crimes indicate that, with the exception of homocide, arrest rates decline substantially as age increases.

The arrest data also indicate that crime, in addition to being a youth phenomena, is predominately non-white. One set of authors, using a technique called multiple regression analysis, found evidence that supported the hypothesis that the increasing crime rates for youth could be explained by deteriorating economic opportunities. In particular, they found that declining job opportunities, especially for young blacks, explained a significant amount of the increase in youth crimes.[1] The implications of this finding will be discussed in some detail when we consider crime prevention programs in the following chapter.

Victims of Crime

The victims of crime, like the perpetrators, are also likely to be non-white. In addition, they are likely to live in urban areas and have low incomes. Table 3 indicates that Negroes were victims of 70 percent of all homocides, 68 percent of all assaults and 60 percent of all rapes. Whites were victims of 60 percent of the armed robberies and 62 percent of the unarmed robberies. The Table also indicates that Negroes have a higher probability of being victims of all these types of crime.

Table 4 classifies crime victims by income. The data in the Table emphasize that those at the lowest income levels suffer the highest crime rates and have the highest probability of being victims of crime.

Thus, it appears that the victims of crime are those who can least afford it. The value of lives and limbs lost, earnings foregone, the cost of hospitalization, rehabilitation, and mental and physical anquish are impossible to measure. Yet, crime occurs and will never completely vanish. The question of whether we can help the victim, and reduce the impact of the criminal act committed on him, arises. Programs designed to accomplish this goal, called victim compensation programs, require expenditures. If society desires to compensate victims of crime, what is the best way to accomplish the goal? What are the alternatives? What are the implications of various types of types of victim compensation programs? This is the topic of the next s[redacted]

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[1]Llad Phillips, Harold L. Votey, Jr., and Darold Maxwell, "Crime, Youth and the Labor Market," Journal of Political Economy, 80, No. 3 (May/June 1972).

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Table 3

Victims by Type of Crime & Race: 1967

	Homocide	Assault	Rape	Armed Robbery	Unarmed Robbery
Total Crimes	3,274	75,198	7,908	54,942	51,255
Negro Victims	2,291	51,135	4,745	21,977	19,477
Percent	70	68	60	40	38
White Victims	1,014	24,063	3,242	32,965	31,778
Percent	31	32	41	60	62
Probability Negro*	.379	8.455	.785	3.634	3.220
Probability White*	.056	1.335	.179	1.829	1.763

Source: 17 cities reported in National Commission of Causes and Prevention of Violence.

* Based upon crime rate per 1,000 population.

Table 4

Victims by Income: 1967
(Rates per 100,000 population)

	INCOME			Over
	$0-2,999	$3-5,999	$6-9,999	$10,000
Offenses Total	2,369	2,331	1,820	2,237
Rape	76	49	10	17
Robbery	172	121	48	34
Assault	229	316	144	252
Burglary	1,319	1,020	867	790
Larceny	420	619	549	925
Auto Theft	153	206	202	219
Number in Survey	5,232	8,238	10,383	5,946
Probability	.453	.283	.175	.376
Probability[1]	.385	.203	.111	.228

[1]Ignores Larceny and Burglary Totals.

Source: NORC Survey. Reported in the Challenge of Crime in a Free Society by the President's Commission on Law Enforcement and Administration of Justice.

(Activity: Have students obtain information similar to the information in the previous section for their own city or area. Discuss the amount of crime and trends in crime in the locale. Who commits the crimes? Who suffers the loss? Who are the victims?)

Victim Compensation[1]

We have mentioned that the person most likely to be a victim of a criminal act is the person who can least afford to be a victim. Also, even if spending aimed at decreasing crime is increased by a large amount, crime will never completely disappear. Therefore, many individuals have attempted to devise programs which in some way reduce the economic costs of crime ~~to the~~ victim. Programs designed to accomplish this goal are called victim compensation programs.

Victim compensation programs - Insurance provided by government to cover the costs incurred by the victim of a criminal act.

The discussion that follows centers on victim compensation programs. However, the economic principles developed in the discussion can be readily applied to the analysis of other problems that society faces. In particular, we are going to discuss whether victim compensation should be provided in the public sector of the economy or in the private sector (for example, by private insurance companies). The same type of analysis can be applied to such diverse problems as pollution and auto safety. For instance, should all individuals be required, by law, to have and wear seat belts or should they simply have the option of buying and wearing such devices? Should individuals provide their own police protection or should this service be provided collectively through a governmental unit? To answer these questions, one must center discussion on what economists call externalities or neighborhood effects.

Externalities (neighborhood effects) - These result when an "innocent bystander" receives a benefit or incurs a cost because of someone elses action.

Example: If I hire a guard to stand in front of my house, my neighbor will also get some protection, but he will not have to pay for it. He has received a benefit for free.

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[1]This section draws heavily from Duane G. Harris, "Compensating Victims of Crime: Blunting the Blow," Business Review, Federal Reserve Bank of Philadelphia, June 1972, 14-20.

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Example: If a factory pollutes the air and people who live nearby find the paint falling off their homes, the people suffer a loss. But they are not paid (compensated) for their inconvenience. They have suffered a loss for which they were not paid.

With respect to victim compensation, we want to determine whether it should be provided, and if it should be provided, whether it should be provided in the public or the private sector of our economy. Before centering on this discussion, a brief look at the history and present status of victim compensation programs is of some interest.

The idea of compensating victims of crime dates back 4000 years to the Babylonian Code of Hammurabi. Under this code, the individual robbed itemized his losses and was compensated by the city and governor in whose province the robbery was committed. In England, in the 7th century, laws included lists of payments for all types of crimes. Every part of the body had its value, from 50 shillings for an eye or foot to a sixpence for a toenail.

During the 10th century, compensation for victims was replaced by mutilation and death for the offender. The principle of compensation was not present again until 1694, when New Zealand and Great Britain started programs. The New Zealand plan provided money payments for various crimes while in Great Britain the programs did not provide payments for suffering and pain, but no limits were made on total amounts paid. The Great Britain program also provides payments for those injured while trying to avoid crime or while trying to capture an offender.

California and New York were the first states in the U.S. to begin victim compensation programs. California has two programs, one for victims and one for Good Samaritans (those injured while trying to prevent, preventing or apprehending a criminal). Awards are made only to families with dependents and only up to an amount equal to $5,000. In New York no limit is placed on medical expenses for victims; however, $15,000 is the most paid for lost earnings or loss of support.

As of 1972, Maryland, Hawaii, Massachusetts and Nevada had some sort of compensation program. As of that date, Illinois, Ohio, Michigan, Arkansas and New Jersey were considering victim compensation programs. In 1965, a victim compensation bill was introduced in Congress but did not pass. Senator Mansfield reintroduced the bill in 1970 and a similar bill was introduced in the House by Rep. Green in 1971.[1]

It is interesting to note that bills are being introduced in state legislatures and in Congress at a time when taxpayers are upset about taxes, voting down bond issues for schools and concerned about the size of

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[1] Ibid., p. 15.

government. Given this situation, public officials should take care to spend tax dollars in areas where government can do a better job than private business, leaving private businesses the job of accomplishing other tasks, that is, the ones private business can provide more efficiently.

This leads to a discussion of the distinction between public and private goods. Specifically, we address ourselves to a discussion of whether victim compensation is a public or a private good.

Public good - A good which is provided collectively at some level of government.

Private good - A good that is provided for in the private sector.

There are a number of criteria one can use to determine whether victim compensation (or any other good or service) should be provided in the public sector (as a public good).

If externalities or neighborhood effects exist, a good or service may qualify as a public good. My neighbor receives protection free if I hire a guard to patrol in front of my house. In other words, I cannot isolate the benefits of my expenditure. When this is the case, the public sector is often used to share the costs. Thus, through taxes everyone is required to purchase some police protection.

Do neighborhood effects exist with respect to victim compensation? Hardly. If I am a victim of a crime (say assault) and I sue the offender, I, and only I, receive benefits. If I purchase insurance, only I recieve benefits. If I choose neither, should society compensate me because I failed to provide for myself? Victim compensation does not appear to qualify as a public good on these grounds.

A second criteria to determine if a good qualifies as a public good is to determine whether or not private remedies are adequate. If I sue my attacker, I might not be able to recover damages because he has no money. The police might not even find him. The law suit might be too expensive. But I could have bought insurance. If I didn't, it's probably because I viewed the probability of being a victim as a very small one. Thus, I spent my income elsewhere. Should I be compensated for poor choice? If the answer is no, then this good does not qualify as a public good on inadequate remedy grounds.

Even if private remedies are available and sufficient neighborhood effects do not exist, there might be other justifications for the provision of victim compensation by government. In particular, if this type of program is deemed to be a merit good, then we might want to guarantee the good through the public sector.

Merit good - A good society might wish to impose on individuals because society feels it has "better" judgment than individuals as to what is best for them.

Example: Auto seat belts that are mandatory.

Is victim compensation an economic good that we feel everyone should have, whether they want it or not? Is it a good that everyone should pay for through taxes? How can we judge society's preferences? Insurance, in general, is not a merit good. We do not compensate victims of auto accidents, tornados or fires. Should we compensate victims of crime?

Most individuals have enough income to insure themselves if they choose. Thus, there is little justification for providing compensation to all people in society. But, what about the poor who are more likely to be victims of crime and be least likely to have insurance? If society feels everyone should have minimum protection, then government might be required to provide compensation for the poor.

Compensation for the Poor

Although victim compensation might not meet any of the standard tests to qualify as a public good, society might determine that, on equity grounds, all should have access to minimum protection against the costs of crime regardless of income level. But, how should this protection be provided? Some of the following questions should be answered before deciding how to provide this good. (Note: These questions should be excellent discussion questions, not only for victim compensation but also for safer products, seat belts, etc.)

Should government provide the protection, that is, be the insurance company; or, since the machinery for insurance in the private sector is already set up, should government issue insurance vouchers to the poor and allow the poor to pick the insurance company they prefer? (An analyogous question might be posed with reference to the educational voucher plan.) Finally, some individuals value freedom of choice highly. These individuals would argue that we should simply give the poor the means (income) to enable them to purchase victim compensation if they choose. Thus, they have the choice of being insured but only if they wish.

Whatever plan is adopted (if any one is), it will cost money. Even if we have limited compensation to the poor (those with incomes under $3,000), and paid victims in the same amount as provided under workman's compensation, the cost will run over $350 million per year.[1]

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[1]Ibid., p. 20.

(Activity: Have students determine if Minnesota has or is considering a victim compensation program. What type is it? What does it provide? Do they have any suggestions on how to change it? What is the cost of the program (or its likely cost)?

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3. THE ECONOMICS OF CRIME[1]

Economists tend to believe that crime, in most cases, is simply a business orientated economic activity which is undertaken for much the same reasons as other types of economic activity. To reduce the frequency of crime, economists generally recommend we raise the costs of crime. This, of course, is the general economic principle that if you raise the price of anything, the quantity demanded will diminish.[2]

Thus, we must look at the factors that affect the costs and benefits of criminal activity before we can suggest methods that might lead to a decrease in the rate of crime.

Benefits of Crime to the Criminal

The benefit to the individual criminal from committing an economically motivated crime is the expected income he gets from the crime. That is, the increase in purchasing power from the crime. To decide whether to commit the crime, the criminal must determine the additional benefits (marginal revenue or marginal private benefits) from the act and compare these additional benefits against the expected additional costs (marginal costs of committing the act). If the additional benefits are greater than the additional costs, he commits the crime. If the additional costs are greater than the additional benefits, he does not commit the criminal act. This does not mean that the economist believes that the criminal sits down with a pencil and paper and does all of the necessary mathematical calculations. Rather, economists believe that the criminal behaves as if he makes all of these calculations.

An analogy can be drawn. No one holds that an individual who is driving his car and desires to pass the car in front of him calculates his speed, the speed of the car in front, the speed of an approaching truck and determines needed acceleration and distances to pass safely. But, it is doubtful that anyone believes he (the driver) does not behave as if he makes these calculations.

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[1]This Chapter draws heavily from A. F. Schreiber, Paul K. Gatons, and Richard B. Clemmer, Economics of Urban Problems: An Introduction (New York: Houghton Mifflin Company, 1971) Chapter VII.

[2]D. Meiselman and G. Tullock, "Preface," in S. Rottenberg, ed., The Economics of Crime and Punishment, (Washington D.C.: American Enterprise Institute, 1973).

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Private Costs of Crime to the Criminal

There are a number of factors that influence the cost side of the decision to commit a crime.

(1) The Alternative or Opportunity Cost - Generally, this is the income the criminal could earn in his best alternative legal occupation. It is the income the criminal gives up in order to pursue the illegal occupation. Thus, the greater his skills (human capital) the greater the cost of committing an illegal act. If he is highly skilled, he gives up more income than if he was unskilled (low alternative income from a legitimate occupation).

(2) The risk of being arrested also affects the decision to commit a crime. The higher the risk, the greater the potential cost of the crime, therefore, the lower the rate of crime.

> Clearance Rate - Normally considered to be a measure of the ability of the police to solve a crime. A cleared crime is one in which the police have identified the offender and have enough evidence to arrest him. The clearance rate is the percentage of total crimes that were cleared.

$$\text{Clearance Rate} = \frac{\text{Number of Arrests}}{\text{Total Number of Crimes}}$$

Thus, if more arrests occur, the economist would predict that the crime rate will decline, all other things being constant.

(3) The probability or the risk of being convicted has effects on the costs of criminal activity. The greater the risk of being convicted for a criminal act, the greater the expected cost, thus the lower the amount of crime, all other things being equal.

$$\text{Conviction Rate} = \frac{\text{Number of Convictions}}{\text{Number of Crimes}}$$

Thus, the economist would predict that the greater the conviction rate, the higher the expected costs of crime (price), the lower the amount of crime, all other things being constant.

(4) Other costs:

a) costs of legal defense
b) foregone earnings while in prison (the opportunity cost of being in prison)
c) lower future earning power because of having a criminal record

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Economics of Crime Prevention

Since the number of economically motivated (caused) crimes depends on the private costs and benefits to the criminal, crime prevention programs can be viewed as attempts to increase the private costs and reduce the private benefits that the criminal receives from committing a criminal act. These costs and benefits can be affected by making changes in the Criminal Justice System (CJS). This system is comprised of four major interrelated areas.

(1) Crime deterrence or crime prevention. Examples of deterrence or prevention programs are: employment programs, better street lighting, increased patrolling by police or better locks, burglar alarms and private guards.

(2) Detection and apprehension. In this area we are concerned with the number of officers, vehicles and communications systems. Changing these factors might have some effect on the crime rate.

(3) The court system.

(4) The detention system. This sector of the CJS includes activities such as maintaining prisoners, the parole system and rehabilitation programs.

Changes in any or all of these areas can affect the private costs and private benefits of the criminal, thus his activities.

Policy

There are a number of policies society can undertake in order to control economically motivated crime. These policies are suggested by various sectors of the criminal justice system.

Earnings from legal occupations - It has been mentioned that one of the factors that cause criminal activity is the opportunity costs of the criminal (income earned by using his skills in a legal profession). If an individual has low opportunity costs, it is more likely that he will commit a crime. Thus, crime may be reduced by increasing the opportunities and income that an individual can obtain from legal employment. There are a number of things society can do to achieve this goal.

(1) Legislation prohibiting discrimination against blacks, who commit most crimes, increases opportunities for earnings in legal professions.

(2) Education and training programs within prisons may enable ex-convicts to get a new start in legal employment if they have learned more than how to make license plates or how to do large batches of laundry. At present, 95 percent of prison costs are used for custody and only 5 percent for rehabilitation programs.[1]

(3) Job training and education programs outside of prisons. Are these programs public or private goods? Should government make the necessary expenditures or should businesses be required to hire the unskilled and train them? If some but not all businesses hire the hard-core unemployed, their prices will increase and consumers will buy from the low cost firms who do not hire the unskilled. Should businesses that hire the hard-core unemployed receive payments from the government (subsidies) to cover their increased costs? Should tax "breaks" be given to these firms to induce them to hire the unskilled?

All of the above mentioned programs act as deterrents to crime by increasing the costs of crime to the criminal. All accomplish this goal by increasing potential earnings from legitimate occupations.

A second way deterrent programs can work is by increasing the costs of crime without any corresponding increase in potential earnings from legal occupations. We have already mentioned street lighting programs and improved private protection as deterrent programs. They work as deterrents because of the greater likelihood of capture if they are present. Likewise, the banning of the cheap handgun (the Saturday night special), which usually costs about $5.00, would force the criminal to purchase a gun for perhaps $50 to $200. He is less likely to dispose of the more expensive gun (and less likely to buy it) and will use it more than once before disposing of it. This will improve the ability of police to catch the user. For these reasons the present head of the FBI favors the banning of the cheap handgun.[2]

Increasing the severity of punishment - Another method of increasing the cost of crime to the criminal is to increase the severity of the punishment. Generally, this means longer prison sentences. There are some very serious drawbacks to this type of approach. A criminal may not see much difference between ten and fifteen years in prison. This is especially true if the criminal puts a much higher value on present rather than future income (has a short time-horizon). This is likely to be the case for criminals; especially those from the ghetto areas.

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[1]Schreiber, et.al., op. cit., pp.121-22.

[2]St. Paul Pioneer Press, March 21, 1974, p. 10.

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Also, prisons are often undesirable schools. The longer the criminal is in prison, the more he learns how to be a better criminal. This increases benefits from crime. If he does not learn a legitimate trade and employers refuse to hire him because of his record, his costs of crime decrease. Thus, he commits more crimes when he gets out.

More severe penalties may also lead to increases in other types of crime. For example, if armed robbery and murder carried the same penalty, the robber might kill the victim who is the best witness. Something like this has happened in New York. Recently New York passed "tough" anti-drug laws with respect to selling and possession. The top penalty under the new law (for illegal sale of one ounce or more of a substance containing narcotics or illegal possession of two ounces or more of such substance) is the same as the penalty for murder of a peace officer. That penalty is a life sentence with mandatory prison term of 15 to 25 years before parole eligibility.

The immediate effects of the changes were as follows. The cost of crime for possession and sale increased. This caused some dealers to drop out of the market. With the decrease in supply, prices, therefore profits, increased. This attracted new suppliers who, being willing to accept risks because of the high profits, increased supply. The net effect was about zero. Some sellers dropped out, but others came in. The total number of "pushers" probably remained the same.

More pushers began carrying guns, apparently feeling that if the police caught them they might as well kill the policeman. Why not, the penalty is the same!

Pushers recruited younger boys, aged 14, 15 and 16, to do the selling because they were not covered by the new law. Because pushers were more careful to whom they sold, it became harder to get drugs. The price of drugs increased and more robberies, burglaries and thefts took place so that users could finance their purchases.[1]

This is an example of what can happen if we have a structure of penalties that is not effective. In other words, the penalty must fit the crime and must not be so severe so as to cause the criminal to commit more serious crimes.

(Activity - Have students find out what the penalties are for different types of crime. Have them discuss whether the penalties might affect illegal behavior.)

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[1] Minneapolis Tribune, October 14, 1973, p. 11B

Finally, if penalties are too harsh, judges and juries will be hesitant to convict individuals for the crime committed. This decreases the likelihood of conviction and decreases the costs of crime. Severe penalties can result in plea bargaining - pleading guilty to a lesser offense, thus the offender gets a "softer" penalty.

(Activity - Have students determine whether judges are giving penalties consistent with legal statutes or if judges are giving lesser penalties. Do the same for jury trials. To what extent does plea bargaining prevail, and why?)

For all of the above reasons, it is extremely important to have penalties that fit the offenses.

Deterrence programs - We have already discussed some methods of deterring criminal activity. Generally the discussion focused on deterring crime by increasing earning power from legitimate occupations. The same result can be accomplished by increasing deterrence in either the public or the private sector. For example, if a large increase in patrolling by police took place, business firms and private households would not have to spend as much for locks, burglar alarms and private guards. But, should this be done? Can the same results be accomplished by having individuals assume some of the costs of deterrence?

(Discussion activity - What is the proper share for individuals in crime prevention? Remember the discussion of public and private goods in the section on victim compensation? See also the discussion in Chapter 5.)

(Activity - In St. Cloud, last year, an anti-shoplifting campaign began. This, of course, is a deterrent measure. Have students interview local merchants to determine the effects of the campaign. Attempt to find out the costs of shoplifting.)

(Activity - Recently St. Cloud began participating in a program whereby individuals label their goods - stereos, TV's, etc. A sticker is posted in the window of participating individuals' homes informing potential burglars of the labeling. Has this campaign had any effect on burglaries? Has it shifted burglaries to different areas of the city?)

Increasing the probability of arrest - The costs of crime can be increased by increasing the likelihood that the offender will be arrested for the crime. One factor that might increase this likelihood is improvements in technology. An example, once again, can be drawn from recent experience. Four years ago the Kansas City Police Department purchased four helicopters to be used on a patrol basis by uniformed police officers. At the time of acquisition, police departments around the nation had been

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studying the concept of helicopter patrol, the benefits to police and its deterrent factor in apprehension and conviction.

The mobility, high visibility and law enforcement contribution were considered desirable factors in reducing crime and increasing apprehension. The Kansas City Police Department purchased a number of helicopters. This reduced the costs of crime to citizens. In each succeeding year Kansas City, Missouri has been the only city of its size and crime rate which has reduced the serious crime rate. The reduction has been in serious crime and in situations where the helicopter has been the primary tool in increasing the certainty of criminal apprehension. Fleeing felons in cars cannot outrun the 'copter. On foot, the felon has no chance.

The helicopter is so strategic that when it is involved in an attempted apprehension it directs squad cars on the ground. The result has been an increase in arrests and a decrease in reported crime.[1]

Operation of the courts - The court system can have effects on criminal activity. If courts are lenient, offenders or potential offenders may be more inclined to commit crimes.

If courts have backlogs of cases, defendants may find that there is a long period of time between arrest and trial. Thus, punishment is pushed far into the future. Witnesses may be harder to get. This reduces costs and encourages criminal activity.

Costs and Benefits of Crime Prevention

If society desires to decrease criminal activity, resources must be allocated. How much should society spend on crime prevention programs? The general principle is that as long as the benefits from spending are greater than the costs of the program, the program should be undertaken. If the costs are greater than the benefits, the program should not be undertaken. Therefore, we should spend up to the point where the benefits to society from crime prevention are equal to the costs to society.

Social costs of crime prevention - The value of resources devoted to crime prevention.

Social benefits of crime prevention - The decrease in the costs of crime to society.

To determine the social benefits of crime prevention, we must first determine the costs of crime. If we can reduce the costs of crime, the decrease in these costs are society's benefits from the program. How do we measure the costs of crime?

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[1]This information was provided by J. Hinchliff of the Minneapolis Police Department.

Crimes against persons - The costs of these types of crime are difficult to measure, especially the crime of murder. One way to measure the cost of this type of crime is to estimate the loss of production caused by the crime. For assault and battery part of the costs are the loss of wages, hospital bills and other medical expenses. It is impossible to measure the value of pain or fear to the victim.

Crimes against property - It is easier to measure the costs of this type of crime although there are some problems. For example, arson results in a loss of property. Thus, the victim (owner) suffers a loss. Resources must be diverted from other uses to rebuild the property. In effect, this amounts to a tax on society because it no longer can use these resources for other things. In addition, such losses result in less production. Finally, with respect to theft, the incentives to work and acquire income and property may be reduced. (If someone is going to steal your money or property or burn your factory, why work?) This would result in lower output.

Crimes that have no direct victims - Crimes such as shoplifting and automobile safety violations have costs that are sometimes difficult to identify. Shoplifting has effects similar to a tax. It results in increased prices, thus a decrease in the purchasing power of one's income. The shoplifter, in effect, imposes a tax on the other members of society. Similarly, auto safety violations that result in accidents mean increased insurance rates for those not involved in accidents.

Costs of organized crime - Organized crime provides people with goods and services that are prohibited or regulated by society. These goods and services include gambling, prostitution, loan-sharking and narcotics. The costs to society because of organized crime are huge. For example, one federal agency estimates that the untaxed underworld profits from gambling alone are $600,000 per hour.[1] Organized crime appears profitable.

Income received by organized crime provides funds for activities that may affect most of society. Non-gamblers are affected by organized gambling because those who contribute to illegal activities are helping organized crime enter legitimate businesses. The funds obtained are often used for this purpose. Once in, illegal tactics might be used to drive competitors out of business and reduce competition. With less competition prices rise and the consumer is worse off.

Funds obtained by organized crime from illegal activities are often used to solidify its position by corrupting police and government officials. In fact, organized crime, during prohibition, used this tactic as an aid in achieving its present position in society.

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[1]U.S. Department of Justice, Police Guide on Organized Crime, (Washington, D.C.: U.S. Government Printing Office, 1972), p. 6.

4. THE ECONOMICS OF ILLEGAL ACTIVITIES: THE DRUG CASE[1]

Organized crime is heavily involved in and receives significant revenues from the illegal drug industry. The costs of illegal drugs to society are large. For example, Federal spending for drug related programs grew from $66.4 to $791.3 million in the last five years. In addition, in the U.S. addiction rates, drug law arrests, drug related crime and drug related deaths have increased 604 percent between 1960 and 1970.

Given the severity and magnitude of the problem, it is important that society devise sound policies that result in significant declines in drugs and drug related problems. Economic analysis and the application of economic principles can aid in understanding the problem. There are a number of reasons for this contention.

First, funds available for drug prevention programs are limited. There are a number of different programs that society may choose from in its attempts to control drug abuse. Thus, the situation is tailor-made for the economist. That is, we have limited resources (scarcity) and a choice of programs (alternatives). This, of course, is the economic problem - determining how to best satisfy unlimited wants when limited resources are available.

Second, the channels of supply, the organization of the drug industry and the nature of demand for drugs are all problems of the type familiar to economists. Therefore, if one concentrates on the economic factors of the drug and, in particular, the heroin industry, we should find clues about the effects of various programs and what law enforcement strategies would best control this activity. Before going into that discussion, we first examine the impact of heroin on society.

Costs of the Heroin Problem

Society incurs many costs as a result of drug abuse. Although the addict's problem often seems to only affect him (thus drug abuse is often called a

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[1]The primary sources for this Chapter are: Stephen L. Mehay, "The Use and Control of Heroin: An Economic Perspective," Business Review, Federal Reserve Bank of Philadelphia, (December 1973), 14-21, and Billy J. Eatherly, "Drug-Law Enforcement: Should We Arrest Pushers or Users?," Journal of Political Economy, 82(1), Jan./Feb. 1974, 210-14.

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victimless crime), others are harmed. Premature death results in losses of production and a waste of a valuable resource. Often addicts cannot hold jobs, and this results in a loss of earnings and production for society.

Addict-caused crime is a most serious external effect of drug addiction. In order to finance their "habit", addicts frequently turn to criminal activity. If the cost per day of feeding the habit is $30, the addict may have to steal over $100 a day in merchandise in order to net the $30 dollars.

Some individuals estimate that up to one-half of all property offenses in our biggest cities is addict-caused crime. Votey, Phillips and Maxwell suggest that the marked increase in felony drug offenses in the late 1960's resulted in a marked increase in property crimes.[1] In addition to the above costs, drug related crime and the processing of narcotics law violators results in added expenses in the criminal justice system (police, courts and corrections).

Some more subtle costs can be traced to the drug problem, in particular, heroin; and these costs may be more serious than those mentioned in the previous paragraph. The heroin industry (like the illegal liquor industry during prohibition) is characterized by some degree of monopoly. The monopoly profits can be, and are being, used to bribe police and other public officials. Also, the large profits from heroin sales help organized crime finance its activities in other legal and illegal businesses.

Summing the direct and indirect costs of addiction yields estimates which indicate that each man-year of addiction creates unnecessary monetary costs to society of about $14,000 per year.[2]

Society has the choice of attacking the supply side or the demand side of the heroin industry. We will look at both sides of the market and attempt to come to some conclusion on how to best attack the problem.

The Supply Side

Heroin is derived from the opium poppy which is grown in Turkey and Southeast Asia. The opium poppy is generally converted into heroin in secret labortories in France and Lebanon. Between the production stage and the retail stage of distribution, there are often six other stages of distribution. Simon Rottenberg mentions that the price of a gram of heroin

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[1]Llad Phillips, Harold L. Votey, Jr., and Darold Maxwell, "Crime, Youth and the Labor Market," Journal of Political Economy, 80, No. 3, (May/June 1972).

[2]Mehay, op. cit., p. 15.

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rises from $0.05 in Turkey to $295.00 retail in Chicago.[1] The large profits are attained by the few large firms at the top of the distribution ladder. Retailers are often addicts. They can do few things as well as they deal in heroin. Thus, they have low opportunity costs (the costs of being in this line of work are low). This tends to depress profits for them.

Heroin dealers operate for profits. Since the dealer operates in an illegal market and never knows whether he will realize his profits, the expected profits are the motivating force. These expected profits are determined by the dealers' opportunity costs, the probability of arrest and conviction and the expected sentence (see previous chapter). Most suppliers attempt to pass their risk costs on to consumers. The difference between prices at production and prices at retail are largely the result of enforcement activities aimed at decreasing supply. Distributors at the top are most efficient in passing on the costs. This has important implications for control as will be shown below.

The Demand Side

The demand for heroin, like the demand for other commodities, depends on its price and the price and availability of close substitutes. However, heroin has one unique characteristc. Its continued use produces physiological dependence. This fact has important implications for policy. Before analyzing the policy implications of this characteristic, it is interesting to note the effect of the dependence on the demand of addicts for heroin. Since the substance is addictive, it becomes physiologically necessary for addicts to feed the habit regardless of the price. In this case, the buyer of the commodity becomes unresponsive to changes in price. In the economists language the addicts demand for heroin is perfectly inelastic.

Elasticity of Demand - A measure of consumer response to changes in a factor that determines demand.

Price Elastic - Consumers are very responsive to changes in price. If price decreases by one percent, quantity demanded will increase by greater than one percent (and the converse).

Price Inelastic - Consumers are unresponsive to changes in price. If price increases by one percent, quantity demanded will decrease by less than one percent (and the converse).

In the case of drug addiction, it is likely that for addicts an increase in price will have no effect on the quantity demanded. In this case demand is said to be perfectly inelastic. This situation is shown in Figure 2. If the

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[1]Simon Rottenberg, "The Clandestine Distribution of Heroin, Its Discovery and Suppression," Journal of Political Economics, 76, No. 1, (Jan./Feb. 1968), p. 87.

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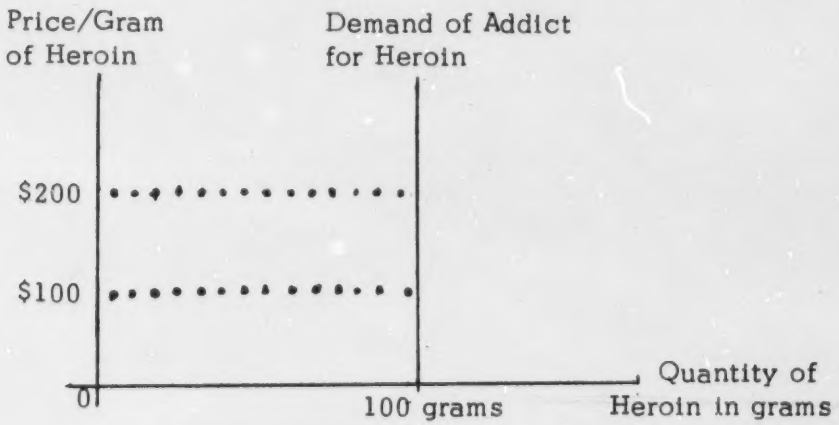
price of heroin is $100 per gram, the quantity demanded is 100 grams. If the price rises to $200 per gram, the quantity demanded remains at 100 grams.

Figure 2



There is, however, another group of heroin users that, apparently, are not addicts but "dabblers." It is likely that price increases will decrease their demand for the product. Finally, potential users may be prevented from trying the product if increases in price or expected price occur.

Coupling these observations with the discussion of the supply of heroin (see above) and with an analysis of the effects of taxes on price and quantity demanded and supplied (immediately below) yields important implications for social policy dealing with drug control.

The Sales Tax

Figure 3 indicates the effect of an imposition of a sales tax on the supply curve. SS is the initial supply curve. If we observe point A, this point indicates that producers will be able and willing to produce and sell a quantity of X equal to 100 units at a price of $2.00 per unit. Assume a sales tax in the amount of $1.00 is imposed on the product. The effect of the tax is identical to an increase in the costs of production; it results in a shift in the supply curve upward and to the left. Thus, at the old price of $2.00 the firm would operate at point C on supply curve S'S' and produce an output equal to 50 units. If the old output, 100 units, was to be maintained, the price would have to rise to $3.00 per unit. In this case, the seller

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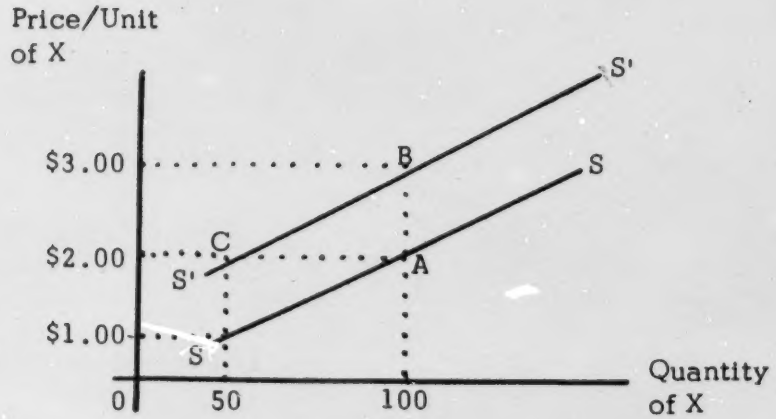
Figure 3

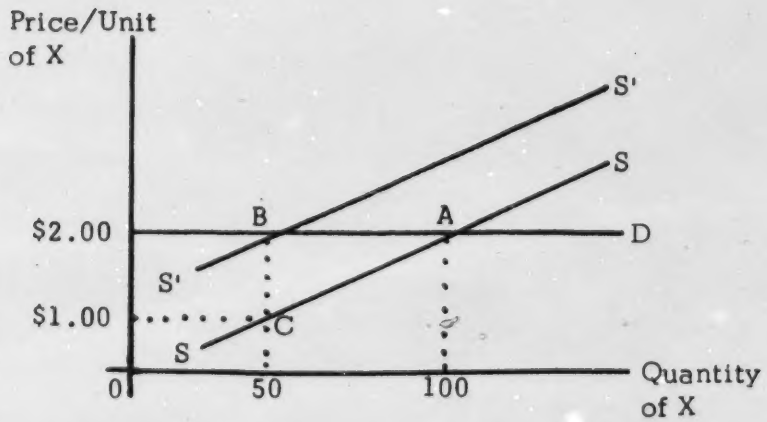
Supply Curve For Good X



would receive $2.00 per unit, the additional dollar going to the taxing body. Who pays the tax? Given the supply curve in the above example, the shape of the demand curve will determine on whom the incidence of the tax falls.

If the demand curve is perfectly elastic (horizontal), as indicated in Figure 4, the seller pays the tax. In this case, buyers are willing to purchase the commodity at a price of $2.00 or below. At prices above $2.00 nothing is purchased. The imposition of the sales tax shifts the supply

Figure 4



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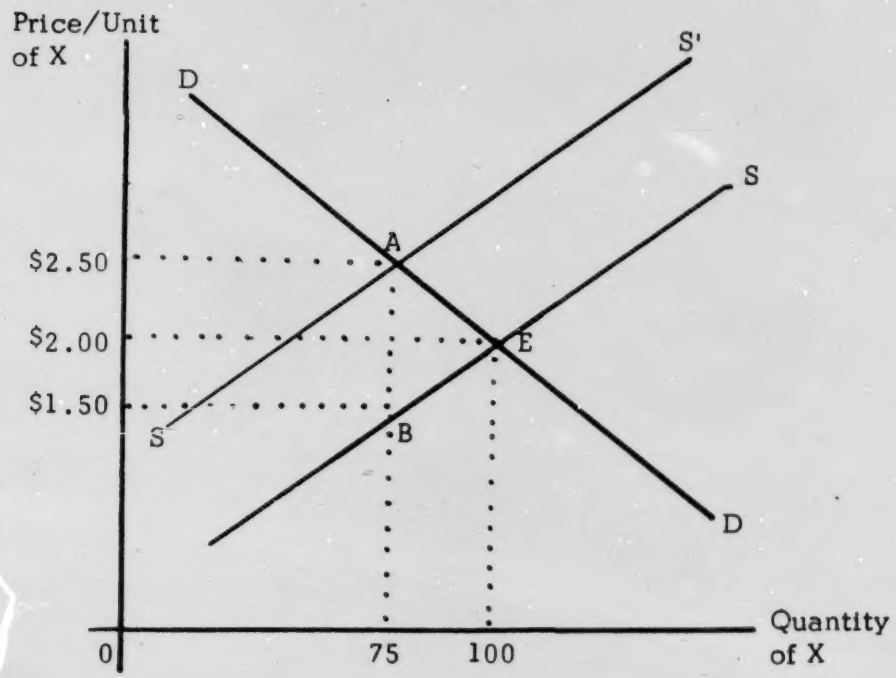
curve upward and to the left. However, at a price above $2.00, nothing is sold. Therefore, price does not change. However, producers only receive $1.00 per unit for the product, the remainder being the amount of the tax. At $1.00 per unit they are only willing to supply 50 units, thus quantity decreases to 50 units.

Figure 5 illustrates a somewhat different solution. In this case the demand curve exhibits some elasticity. That is, as price increases, quantity demanded declines, but not to zero. The initial equilibrium point is at point E, where DD and SS intersect. Price is $2.00 per unit and quantity is 100 units. A tax in the amount of $1.00 per unit is imposed. The supply curve shifts upward by $1.00 at each point. The new supply curve is S'S'. A new equilibrium is attained at point A, where price is equal to $2.50 per unit and quantity is 75 units. In this situation, since price is higher, part of the tax has been shifted to the consumer. The amount shifted to the consumer is $0.50. The producer pays the remainder of the tax, $0.50, and now receives $1.50 per unit. At this price he is only willing to supply 75 units, thus output falls by 25 units.

Figure 5



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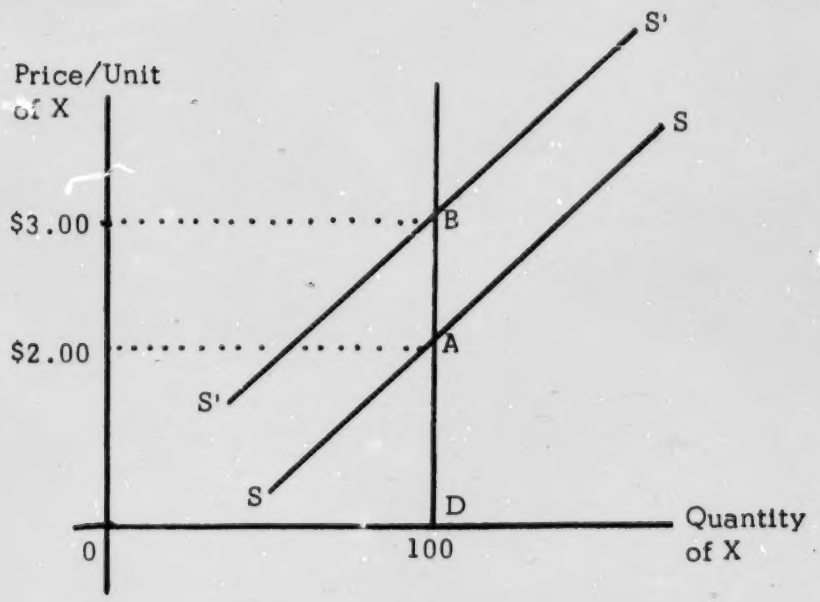
A third and final situation is shown in Figure 6. In this case, the demand curve, DD is perfectly inelastic. Buyers are totally unresponsive to changes in price. An imposition of a tax in the amount of $1.00 per unit increased price by exactly $1.00 per unit. The full burden of the tax has been shifted to the buyer, and quantity is unchanged. This latter occurs because the supplier is still receiving $2.00 per unit for his output, the additional dollar going to the taxing body.

We now turn to the implications of this analysis with respect to the control of illegal drugs.

Figure 6



The Drug "Tax"

Generally, the purpose of a sales tax is to raise revenue. The elasticity of demand determines which group pays the tax (the elasticity of supply also enters into the determination of incidence of taxation but is ignored in this discussion).

The effect of a drug law is similar to the effect of a tax. However, purposes differ. In the case of a drug law the purpose is not raise revenue, but to discourage consumption. There are two general strategies that are available to accomplish the goal: (1) reduce demand or (2) reduce supply. Society through its law enforcement agencies has chosen to

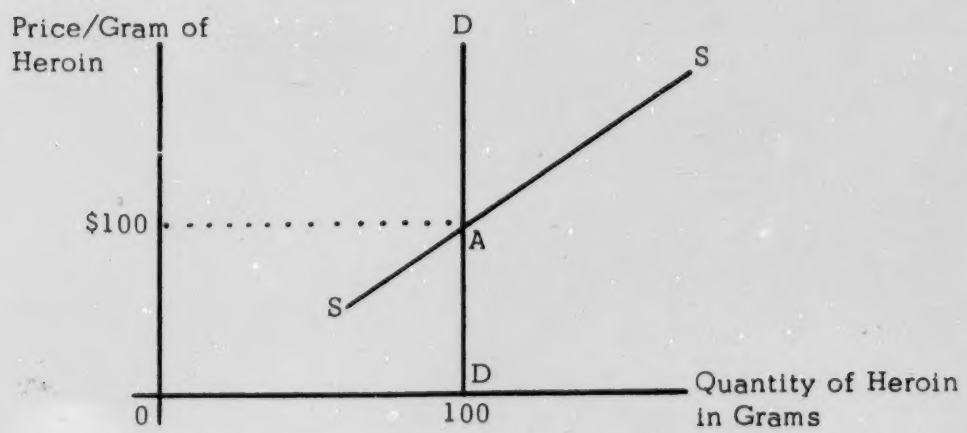
adopt the strategy of attacking the supply side. We will look at the effect of this strategy and suggest that the other alternative is the appropriate one to adopt.

We have argued that the demand curve for heroin by addicts is perfectly inelastic. This means that if price increases addicts will not decrease the amount that they purchase but will pay the higher price. This demand curve is shown in Figure 7. The supply curve in Figure 7 is the normal supply curve. It indicates that at higher prices suppliers will offer more heroin for sale. Initially the situation is one of equilibrium at point A. Price is equal to $100 per gram and quantity is 100 grams of heroin. The total amount spent, thus the revenue to the supplier, is the price times the number of units sold.

Total Revenue = Price x Quantity

$10,000 = $100 x 100

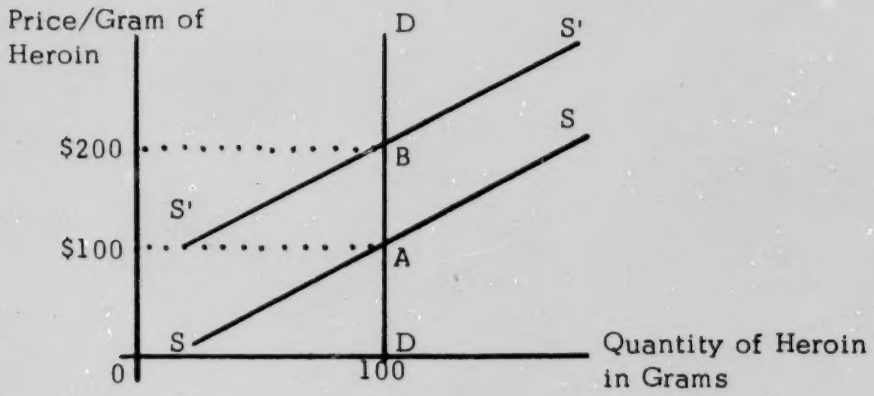
Figure 7



The effect of harassing sellers is to increase the costs of production. In this example, the effect is to increase the cost to the seller by $100 at each level of output. This is indicated by a shift upward and to the left in the supply curve. This is shown in Figure 8. The new supply curve is S'S'. The price rises to $200 per gram and the revenue to the seller increases to $20,000. This increase in price is necessary if the seller is to continue to supply the amount buyers want, i.e., 100 grams.

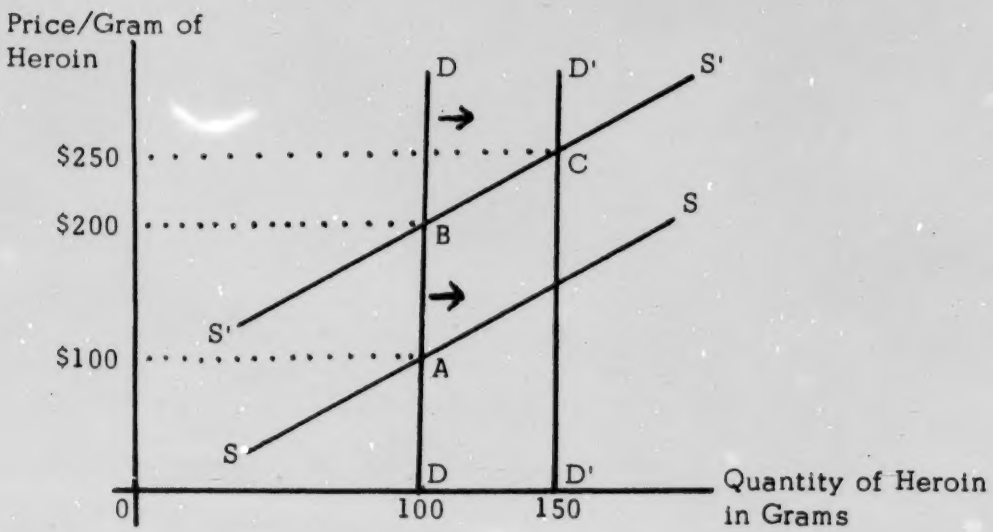
The increase in harassment of sellers of heroin has often been coupled with a decrease in the penalty on users. In some cases, specifically in

Figure 8



Boston and in England, more individuals began using the product. This policy of leniency towards users amounts to, in effect, a decrease in the expected price, i.e., the costs have decreased to the user. The result is an increase in demand, which is depicted by a shift to the right (outward) of the demand curve.[1] The situation is shown in Figure 9. The final equilibrium is at point C.

Figure 9



[1]Eatherly, op. cit., p. 212.

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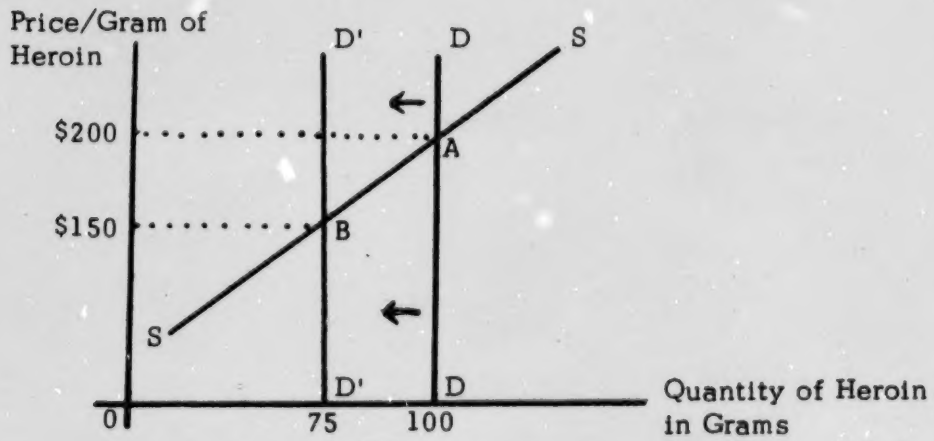
Thus, the effect of harassing sellers and being more lenient to users results in an increase in price and an increase in quantity. The user (buyer) now must pay more for the product. He attempts to pass the increase in cost forward by stealing more from innocent parties. This (tax shifting) results in higher costs to society because of the increase in theft. Finally, it must be stated that an illegal activity, such as selling heroin, could not exist without the cooperation of law enforcement agencies. The increase in revenues to organized crime are used to bribe police and politicians in an attempt to reduce the risks of doing business.

The final effects of harassing sellers are three: (1) there is an increase in the use of the illegal product, (2) crime by addicts increases, and (3) greater corruption occurs.

Arresting Users

Using the diagrams developed above, we can analyze the alternative strategy, arresting users. Only one diagram is needed; it is depicted in Figure 10.

Figure 10



By imposing stricter penalties on users, we decrease the demand by addicts because some are now off the street. There are also some secondary benefits. New users and "dabblers" are discouraged, thus demand does not grow or grows more slowly. Second, some authorities claim that many addicts will not seek rehabilitation without some measure of compulsion. During confinement, some may be encouraged to seek this help.[1]

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[1] Ibid., p. 212-213.

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Since the price is now lower, addicts who are not caught steal less because of the lower price. Finally, corruption decreases for two reasons. The sellers, generally organized crime, have less revenue. There is also less reason to bribe because sellers are not being harassed as much. Organized crime also has fewer funds for other activities.

For all practical purposes, the imposition of the drug tax (law) on users has been shifted to the seller. It appears that the proper strategy to control illegal activities is to harass the buyers rather than the sellers.

(Note: Recently the Minneapolis Police Department began arresting the patrons of prostitutes. This has led to a decrease in demand and pimps have complained that their profits are down substantially.)[1]

Help for the Addict

One possible program that might be undertaken to help addicts stay off heroin after they are released from custody would be a methadone maintenance program.

Methadone - An artifical substitute for heroin which works by blocking the addict's craving for heroin.

This type of program can be strict or permissive. The strict program controls both dosage and the outside consumption of illegal heroin. The object of the strict program is to seek the long-run rehabilitation of the addict. A permissive program does not control the dosage or the consumption of illegal heroin. However, unlike the strict program, it seeks to expose large numbers of addicts to methadone.

The permissive program makes an effective substitute for heroin available at a low cost. This will reduce addict-caused crime and increase society's benefits. But the individual addicts may suffer if they are not encouraged to enter a long-run rehabilitation program. The addict may become addicted to methadone, which may be as harmful as heroin. If the program is strict, the addict's use of illicit heroin is controlled. But, if the addict drops out, society will suffer.

The effects of methadone maintenance programs on the rate of new addicts is uncertain. While non-users will not be allowed in these programs, a strict program will not eliminate the illegal demand for heroin. Thus, new users will find the supply if they wish.

A permissive program will reduce but not eliminate the demand for heroin. Therefore, new users will find an existing supply system. In

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[1]Conversation with V. W. Lindemann of the Minneapolis Police Department.

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addition, price will fall encouraging usage, and the rate of new addicts may rise as a feedback from this program.[1] Of course, if penalties against users have been increased, the new demand will be discouraged.

(Activity - Discuss various programs with students. What programs are available in their locale? What are the likely effects of the programs? Will their search for this information increase their awareness of sources of supply? Is ignorance bliss?)

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[1]Mehay, op. cit., p. 20-21.

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5. THE ALLOCATION OF RESOURCES

> In 1969, the Seattle City Council voted to permit 21 murders, 104 rapes, 962 robberies and 417 assaults as well as various numbers of lesser crimes in the first half of 1970. Stated in other terms, the Seattle City Council voted $17,916,986 for the police department that year.[1]

Had the City Council voted more dollars, the crime rate may have been lower. If the Chief of Police had allocated the funds in a different manner, the crime rate may have been lower. How much should society allocate to the prevention of crime? How should the dollars allocated be spent in order to achieve the maximum reduction in crime?

The problem faced by the law enforcement agency is how to achieve the greatest reduction in crime, given a limited budget. Complicating the matter is the fact that as expenditures are increased crime decreases but at a decreasing rate (diminishing returns). Further, the rate of reduction in crime for the various offenses is different. In addition, a decision must be made on how to divide the limited funds between capital and labor. That is, should we choose more cars, equipment and labortories; or should we choose more policemen, detectives and technicians? Should resources be devoted to decreasing homocides or auto theft? These are problems that economics can help solve.

Allocation of Funds[2]

Ideally, if deterring crime could be accomplished at no cost, society's welfare would be maximized by preventing all crime. This is not possible because it costs resources to reduce crime. Thus, society should spend resources for crime prevention up to the point where the harm forestalled

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[1]D.C. North & R.L. Miller, The Economics of Public Issues, (New York: Harper and Row, 1973), p. 118.

[2]Source: Thomas C. Schelling (Chairman), "Round Table on Allocation of Resources in Law Enforcement," American Economic Review, LIX (May 1969), pp. 504-512. Papers submitted by Anthony Downs, William M. Landes, Simon Rottenberg and Richard B. Hoffman.

is equal to the value or resources employed to prevent crime. This objective requires the calculation of the costs of crime and the benefits of crime prevention. (See Chapter 3.)

Given that limited funds are available for law enforcement, and the fact that there are a wide variety of crimes, agencies should attempt to achieve the maximum reduction in crime from the limited resources. The policy that should be followed is that the additional dollar to be spent should be spent where the greatest reduction in crime occurs. Table 5 illustrates this principle.

Table 5

Type of Crime

	Robbery	Burglary	Auto Theft
Reduction in the Social Cost of Crime Per Dollar Expenditure	$6.00	$12.00	$2.00

In this example, the additional dollar should be spent to reduce burglary because the benefit to society is greatest if this activity is reduced. If there are more dollars to be spent, these additional funds should be allocated among the various crimes in a manner such that the last dollar spent on each crime achieves the same dollar reduction in the costs of crime.

Studies have indicated that if police agencies followed principles such as this, greater efficiency could be attained. Some examples will illustrate this point. It is well known that more crimes occur on certain days and at certain hours. This implies that for optimum efficiency more police should be working during "peak" periods than during "down" periods. A study done in St. Louis indicated that if resources were simply shifted from other days to "peak" crime days, a reduction in the costs in the amount of 15 percent would occur. A similar study for another city indicated that a reallocation of men and shifts between districts would result in a 15 to 20 percent reduction in manpower without any loss in efficiency.

An apparent example of a misallocation of enforcement funds and a violation of basic economic principles is reported by George Stigler. He mentions that the Secret Service, in 1967, spent about half of the budget of $17 million for the suppression of counterfeiting. In addition, there

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were legal costs and imprisonment; but the loss to the public from counterfeiting in that year was $1,658,100.75. Stigler questions whether the Secret Service is allocating its budget most efficiently.[1]

Strategies

Before one can apply the basic allocation principles to crime deterrence, the objective of the law enforcement activity should be spelled out. Once this is done, allocation strategies and their costs are understood.

There are a number of possible objectives a police force may pursue. For example, the goal may be to minimize the rate of indexed crime in the metropolitan area under consideration. If this is the goal, the police would put almost all forces in the highest crime areas in the busiest periods (low income and downtown areas). But this would result in a significant reduction of protection in outlying areas, thus leading to an increase in criminal activities in these less protected areas.

An alternative strategy would be to provide equal resources to all parts of the city. This strategy would result in over-protection in high income areas.

A third strategy might be to attempt to achieve equal crime rates in all parts of the city. Since low income areas have much greater crime rates than in the outlying areas, the police might put all of their forces in this area and still not reduce crime to the level of the high income areas.

Of course, no police force has only one objective; generally they have multiple objectives. Actual allocation strategies represent combinations of those described. The choices are difficult but must be made. Political considerations enter into the discussion, thus the combination of strategies chosen will include some minimum level of service to the middle-income and high-income districts where crime is low but most taxpayers reside.

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[1]George Stigler, "The Optimum Enforcement of Laws," Journal of Political Economy, 78 (May/June 1970), p. 533.

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The Alternative of Competition[1]

If the allocation of limited resources in law enforcement is to be efficient, the social costs of criminal activity must be ascertained. By determining these costs an index of the seriousness of each type of crime, as viewed by society is achieved.

> The social cost of a crime indicates the harmful impact of that crime on the community. Consequently, it also indicates the maximum amount the community would pay to avoid that crime.[2]

Once the costs are determined, efficiency in the supplying of the service can be attained.

> A common misconception is that greater efficiency means lower operating costs. But economic efficiency is much more than that. It involves supplying those services which consumers desire the most, and in the quantities they want, with the minimum uses of society's scarce resources.[3]

Usually, the demands of consumers reveal the goods they want and the quantities they desire. Competition among suppliers assures that the efficient survive. If government supplies a good or service, competition is absent and preferences of consumers are revealed only during periodic elections. Since police services are provided in the public sector, police do not respond to supply and demand forces in the manner competitive firms do nor do they have incentives to be efficient.

If the objective of police programs is to reduce the social costs of crime, and the social costs of crime can be measured, then resources could be devoted to programs likely to reduce the social costs in the greatest amount. In this case, the estimates of the social costs of crime give an indication of what crimes society wants reduced the most. It reveals society's demand for police services.

However, it is difficult to measure the full social costs of crime. In many cases data on costs of crime that are easy to measure are not available. Costs of developing information concerning the effectiveness of

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[1]The primary source for the material in this section is: Stephen L. Mehay, "Police and Productivity: Can the Invisible Hand of Competition Extend the Long Arm of the Law," Business Review, Federal Reserve Bank of Philadelphia, (May, 1973), 3-12. See also: M. T. Malloy, "Operator, Get Me the Rent-a-Cops," The National Observer, (October 14, 1972).

[2]Ibid., p. 5, (Mehay).

[3]Ibid.

various police programs aimed at increasing efficiency may be prohibitive. Equity considerations must be taken into account. It appears that the imperfect technique of simulating demand for police services may be difficult to implement and may not be practical.

There is an alternative called the market-oriented approach, which might be viable.

> The market-oriented approach works in one of two ways. Some protection services can be provided by police and sold directly to recipients. Other services might be produced by private firms, thereby, removing production from the political arena altogether. For either approach to work, the beneficiaries must be identified and those not wanting to pay must be excluded.[1]

If the firms supplying the services are not monopolies, the most efficient firms will supply the service or go out of business. If government wants to decide how much is to be produced, contracting through competitive bidding could be used. The firms offering the lowest bids become the suppliers. They, in turn, sell the services to those desiring the services. The ones willing to pay the price receive the service.

There are some examples of this approach. In many cities, residents of neighborhoods, apartment complexes and suburban areas have hired private guards to supplement regular police activities.[2] In California, the Los Angeles County Sheriff's Department provides services on a fee basis to 30 of the county's 77 cities. Included in the services sold are preventive patrol, traffic patrol, accident investigation and safety officers. The city desiring the service purchases the amount it wants and pays accordingly. This arrangement, called the Lakewood Plan, has a number of implications. (1) It shows that it is possible to have a market type arrangement for police services. (2) Police services can be sold on a fee basis. (3) The charges by the sheriff must cover the costs of the services provided. Even though there is no profit incentive, the sheriff does have incentive to keep costs low. This incentive is competition. If costs are not kept low, the contracting city can provide the service itself.[3]

A Combined Approach

A more efficient allocation of resources can be achieved if signals about consumer demand can be ascertained. This can be achieved by computing the social costs of crime or by allowing private competitive firms

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[1] Ibid., p. 9.

[2] Malloy, op. cit.

[3] Mehay, op. cit., p. 11.

to supply the needed service. In either case, more information about consumer preferences is attained. Perhaps a combination of the two approaches would result in improved efficiency and reduce or slow down the rate of increase in crime.

Neglected thus far in this discussion have been considerations of equity. Although we could increase efficiency by adopting a market-oriented approach, those with low income (thus a lack of means to purchase needed police services) might be ignored. Police services could easily be classified as a public good on either equity or merit considerations. Thus, police services for those who desire such services could be provided in any of the manners previously discussed in the section on victim compensation.

Other Considerations

We have discussed the allocation of police to different areas (or neighborhoods) in a city. Yet to be mentioned is the allocation of resources toward specific types of crime, specific offenders and the employment of police man-hours to other public service tasks.

With respect to the specific type of crime to be reduced, the decision is essentially a political one. For example, on economic criteria few economists would advocate prohibition, harsh drug laws or laws against gambling or prostitution. Nevertheless, all are prohibited in one form or another in our society. Once this decision is made, a proper calculation of harm done would aid in allocating resources to deter these types of crime.

Since most criminal careers begin early in life, the allocation of significant resources geared to aiding youths achieve adequate employment may forestall whole careers of harm-doing. Thus, deterrence programs aimed at youth crime and programs aimed at reducing the difficulty of job market entry might aid in preventing or delaying entry into illegal activity.

Some individuals have noted that police perform a number of functions that, if eliminated, would increase their efficieny. For example, police get cats out of trees, help settle family arguments, take the sick to hospitals and act as general counselors to the aged and others. There are certain dangers in eliminating these types of activities because they help establish good relations and often serve as important sources of information on illegal activities. Police know their peak duty times. Therefore, they could handle the service calls during their slow periods. This seems like a rational course of action because it appears that many of these types of activities are not so urgent that they must be handled immediately. There is evidence which indicates that during periods of great criminal activity,

e.g., during the big city riots of the late 1960's, calls for assistance decreased significantly when the police were occupied elsewhere.[1]

Finally, a number of studies by economists on the causes of crime have indicated (and there seems to be some consensus) that among the most important determinants of crime are the following:

(1) The level of unemployment, especially for youths.

(2) The level and distribution of income.

(3) Immigration rates into urban areas.

(4) The percentage of the population that is non-white.

The first three of these determinants are self-explanatory. The last deserves some expansion. It is generally held that blacks have a higher crime rate than whites for at least three reasons:

(1) They have lower incomes, thus lower opportunity costs.

(2) They are discriminated against, thus have difficulty finding rewarding legitimate employment.

(3) They regard the law as something that has historically been used against them and feel alienated from the law thus ignoring it.

An attack against the causes of crime listed above would probably yield fruitful results. In any event, crime costs and so does crime prevention. By making the appropriate calculations concerning the costs of crime, by determining how criminals respond to law enforcement activities and by applying basic economic principles economics can aid in establishing a more efficient criminal justice system.

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[1]Martin T. Katzman, "The Economics of Defense Against Crime in the Streets," Land Economics, 44, (Nov. 1968), p. 440.